State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3644 FAX (603) 271-2181

July 10, 2001

Johnson and Johnston Associates, Inc.
130 Route 111
Hampstead, New Hampshire 03841
Attn.: Robert Bean, Plant Engineer

Subject: **HAMPSTEAD –Johnson and Johnston Associates, Inc., 130 Route 111, Comments on the Site Investigation Report, DES Site # 200001038**

Dear Mr. Bean:

The New Hampshire Department of Environmental Services (Department) is in receipt of the Site Investigation Report (SI) prepared on behalf of Johnson and Johnston Associates, Inc., (JJA) by Cushing & Jammallo, Inc. The SI was submitted to the Department due to groundwater at the site exceeding Ambient Groundwater Quality Standards (AGQS). The Department approved the scope of work for the SI on May 17, 2000.

Groundwater at the site continues to exceed AGQS in the following locations: north of the operations building; the former catch basin located east of the Operations Building; and down gradient of the septic system for the Operations Building. In addition, water supply wells #1 and #2 exceed AGQS. These wells are currently utilized by the facility in the washrooms. Based on a review of the SI. the Department offers the following:

Septic System for the Operations Building

Monitoring wells CJ-3 and ATC-4-2 have not exceeded AGQS for volatile organic compounds (VOCs). However, there are trace levels of several VOCs present in these monitoring wells located down gradient of the septic system. The Department had previously requested that JJA sample the liquid present in the septic tanks. According to the SI, due to the accumulation of sludge in the septic tank, liquid from the septic distribution box was sampled and not the septic tank. The Department requests that JJA sample the liquid and/or sludge present in the septic tank for the Operations Building. The sample should be from as close to the bottom of the tank as possible. The sample should be tested for VOCs via EPA Test Method 8260B.

Water Supply Wells

Samples taken from the three (3) on-site water supply wells revealed the following: well #1 exceeded AGQS for 1,1-dichloroethene (DCE) and methyl-t-butyl-ether (MTBE); well #2 exceeded AGQS for DCE and MTBE; and well # 3 met AGQS. The report states that water supply well #1 is strictly utilized on-site for irrigation purposes. Water supply wells #2 and #3 are utilized in the facility's sinks and toilets.

The Department concurs with the recommended action in the SI to collect water samples from the facility's internal faucets and based on those findings perform a risk characterization in accordance with the NHDES "Risk Characterization and Management Policy" to evaluate the risk to human health from the employee contact with this contaminated water. The Department recommends EPA Test Method 524.2 when testing for VOCs in water supply wells. The Department requests that JJA contact Jim Gill of the Department's Water Supply Engineering Bureau at 271-3139 to determine if the facility's water supply wells are regulated as a community water supply.

East of the Operations Building

Monitoring well ATC-2 is located east of the Operations Building in the vicinity of a former catch basin. This monitoring well exceeds AGQS for DCE, 1,1-dichloroethane, 1,1,1-trichloroethane (TCA), trichloroethene (TCE), tetrachloroethene (PCE) and vinyl chloride. The report suggests that the source of contamination is a 1989 release of "fifteen to twenty gallons of 1,1,1-trichloroethane" to the storm drain during a delivery mishap.

The Department requests that JJA investigate the catch basin as a potential source of contamination. If the information is inconclusive, the Department may require JJA to characterize the soil within this area (i.e. soil gas survey or soil borings). In the event the catch basin proves to be a contamination source, JJA will be required to submit a Remedial Action Plan to remove, treat or contain the contamination source to prevent additional release of contaminants to groundwater.

The Department requests the following information concerning the former catch basin: describe the construction of the former catch basin; describe the closure of the catch basin; describe any piping that may discharge from the catch basin and any characterization at the outfall; describe any connections to the catch basin (e.g. floor drains); and detail any other activities that may have contributed contamination to the catch basin.

In addition, the groundwater contours described in the SI suggest that the contamination plume may be traveling east off JJA's property. Therefore, the Department requests that JJA further characterize the groundwater contamination to the east of the Operations Building. Currently, bedrock monitoring well ATC-2 is the only sampling

point in this area. The Department requests that JJA determine the full extent of the contamination plume east of the Operations Building.

The Department has determined that an interim groundwater monitoring program leading to a Groundwater Management Permit needs to be established at this site. The Interim Monitoring Program shall consist of the following:

Monitoring Locations	Sampling Frequency	Parameters
ATC-2, ATC-3, ATC-4-2, CJ-1, CJ-2, CJ-3, CJ-4S, CJ-4D	April each year July each year November each year	pH, Temperature, Specific Conductance, Static Water Elevation & Volatile Organic Compounds (EPA Test Method 8260B)
Water Supply Wells #1, #2 and #3, Alliant Supply Well and Land & Sea Supply Well	April each year July each year November each year	pH, Temperature, Specific Conductance, Volatile Organic Compounds (EPA Test Method 524.2)
ATC-2, ATC-3, ATC-4-2, CJ-1, CJ-2, CJ-3, CJ-4S, CJ-4D, Water Supply Wells #1, #2 and #3, Alliant Supply Well and Land & Sea Supply Well	November each year	Natural Attenuation Parameters: Oxidation-Reduction Potential, Nitrate, Sulfate, Methane, Ferrous Iron, Soluble Manganese, Chloride, Dissolved Oxygen, Total Organic Carbon

The Department suggests that natural attenuation parameters be sampled on an annual basis. All samples must be collected in accordance with EPA approved sampling protocols and the results submitted to the Department within forty-five (45) days of the sampling event. The Department will consider the results of the Interim Monitoring Program in formulating the sampling requirements for the Groundwater Management Permit. The Department is aware of past sampling results, which have indicated non-dectable levels in some wells at the site, and anticipates that a reduction in sampling frequency for these wells may be possible if favorable results continue to be obtained.

The Department requests that JJA submit a Scope of Work with a time line by August 31, 2001:

1. Sample the liquid and/or sludge that is present in the septic tank for the Operations Building. The samples should be tested for VOCs by EPA Test Method 8260B and the results submitted to the Department within forty-five (45) days of the sampling event;

2. Delineate the extent of the groundwater and soil contamination east of the Operations Building;

3. Respond to the above questions concerning the use and construction of the former catch basin; and

4. Comply with the Interim Monitoring Program, leading to JJA applying for and obtaining a Groundwater Management Permit.

The Department appreciates your continued attention to this matter. If you have any questions or need additional information, please contact me at 271-2800.

Sincerely,

David C. Bowen

David C. Bowen, Hydrogeologist
Hazardous Waste Remediation Bureau

DCB/amr
L:\HWRB\Admin\DBowen\responSI601.doc
cc: John Regan, DES/WMD via e mail
Joseph Jammallo, Cushing & Jammallo, Inc.
Selina Makofsky, DES/WD